Catalogue of American Amphibians and Reptiles.

Lovich, R.E. and L.L. Grismer. 2001. *Xantusia gracilis*.

Xantusia gracilis Grismer and Galvan
Sandstone Night Lizard

Xantusia henshawi gracilis Grismer and Galvan 1986:155. Type locality, "Truckhaven Rocks, Anza-Borrego Desert State Park, San Diego County, California." Holotype, San Diego Society of Natural History Museum (SDSNHM) 64830, collected 17 February 1985 by L.L. Grismer and M A. Galvan (examined by authors).

Xantusia gracilis Lovich 2001:477

• **CONTENT.** No subspecies are recognized.

• **DEFINITION AND DIAGNOSIS.** Adult *Xantusia gracilis* average 60.0–71.0 mm SVL. The head and body are somewhat dorsoventrally flattened. Vertical pupils are present. Femoral pores are larger in males than in females.

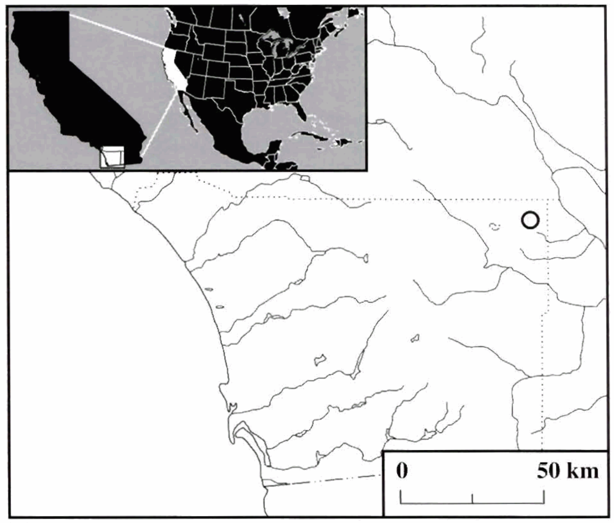
This species differs from *X. henshawi* and *X. bolsonae* in having enlarged temporal scales one-half the size of the postparietal, absence of enlarged auriculars, absence of a vertebral furrow (in life), a narrower head, limbs that are not as widely splayed, a lack of a significant diel color-phase change, a nearly complete absence of black peppering on ventral surfaces, a dorsal body pattern consisting of reduced round spots, significantly fewer scales around the upper arm and leg, a higher number of supralabials, fewer longitudinal rows of dorsal scales, a smaller interhindlimb distance/SVL ratio, a narrower body, fewer dorsal scales at midbody, and thinner limbs. Grismer and Galvan (1986) also found differences the following life history attributes: *X. gracilis* inhabits sandstone, is found exclusively within a desert environment, and utilizes small burrows in addition to exfoliating sandstone. *Xantusia henshawi* and *X. bolsonae* are not found in association with sandstone, but primarily in exfoliating granodiorite and metavolcanic rock, respectively. *Xantusia gracilis*, *X. henshawi*, and *X. bolsonae* are distinctly allopatric, with the nearest *X. henshawi* to *X. gracilis* being 32 km distant (Grismer and Galvan 1986) and the nearest *X. bolsonae* being hundreds of km distant in Durango, México. Seven of 26 presumptive gene loci (Bezy and Sites 1987) and the intensity of expression of two subunits of the lactate dehydrogenase isozyme (Sites et al. 1986) distinguish *X. gracilis* from *X. henshawi*. Lovich (2001) demonstrated that *X. henshawi* and *X. gracilis* differ by at least 18 cytochrome b nucleotide changes.

• **DESCRIPTIONS.** The original description was extensive, and described *Xantusia gracilis* as a subspecies of the Granite Night Lizard, *Xantusia henshawi* (Grismer and Galvan 1986). The results of a molecular study by Lovich (2001), in concert with morphological and other pre-existing data, recommended full species status.

• **ILLUSTRATIONS.** Grismer and Galvan (1986) presented black-and-white photographs of live and preserved specimens, habitat, and black-and-white drawings of the head. A color photograph is in Lovich (1999). Gray-Lovich (2000) included a black-and-white drawing of mating behavior.

• **DISTRIBUTION.** *Xantusia gracilis* is restricted to a single sandstone outcrop referred to as the Truckhaven Rocks in the Anza-Borrego Desert State Park of southern California. This rock formation is located on the south slope of the Santa Rosa Mountains in San Diego County. The entire habitat for *X. gracilis* is approximately 3 km² in size. These lizards are lithic obligates of the sandstone formation they occupy, which is consistent with the lithic affinities of their sister taxon (*Xantusia henshawi*) and other xantusiids (e.g., *Xantusia bolsonae* and *Cricosaura typica*). Lizards occupy sandstone crevices and burrows primarily in and along the canyons that cut through the Truckhaven Rocks.

• **FOSSIL RECORD.** None.



MAP. Distribution of *Xantusia gracilis*: the circle denotes the type locality and the entire 3 km² range of the species.



FIGURE. Adult *Xantusia gracilis* on the sandstone outcrop referred to as the Truckhaven Rocks in the Anza-Borrego Desert State Park of southern California (photograph by R.E. Lovich).

• **PERTINENT LITERATURE.** Little work has been done on *Xantusia gracilis*. The most recent work was that of Lovich (2001), who analyzed its phylogeography with respect to its sister taxon, *X. henshawi*. Bezy and Sites (1987) looked at allozyme evolution and variation within the Xantusiidae. They used one *X. henshawi* and one *X. gracilis* and found moderate levels of allozyme divergence between the two. Their conclusion was that *X. henshawi* and *X. gracilis* were sister groups. Sites et al. (1986) found that differences in seven of 26 presumptive gene loci and the intensity of expression of two subunits of the lactate dehydrogenase isozyme distinguish *X. gracilis* from *X. henshawi*. Grismer and Galvan (1986) first described *X. gracilis* as a subspecies of *X. henshawi* based on a thorough morphological analysis, distribution, ecology, and behavioral observations *ex situ*.

• **ETYMOLOGY.** The adjectival name *gracilis*, from the Latin meaning "slender," pertains to this population's slender habitus.

LITERATURE CITED

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